

current from said ridges of said relief object and less intense light is generated by areas of said electroluminescent device weakly coupled to said current from valleys of said relief object to form an image of the relief object;

a variable resistive layer being proximate to said organic electroluminescent device, said variable resistive layer being comprised of conductive particles dispersed through a non-conductive medium;

a flexible electrode that substantially covers a surface of said variable resistive layer; and

said electrical current source being a direct current source having one lead coupled to said single electrode of said organic single electrode device and a second lead exposed at a surface of said flexible electrode so that a localized pressure gradient generated by a portion of a relief object contacting said flexible electrode forms a conductive path through said variable resistive layer which corresponds to said localized pressure gradient whereby said current flows from said direct current source and flexible electrode through which said variable resistive layer to said single electrode of said organic single electrode electroluminescent device in correspondence with said localized pressure gradient to generate a light image of said relief object.

48. A method for imaging a relief object comprising the steps of:

coupling a single electrode of a single electrode electroluminescent device to a current source;

contacting a relief object to an exposed surface of said single electrode electroluminescent device;

coupling said current source to said relief object so that current flows from said relief object to said electroluminescent device to generate an optical image of said relief object;

locating a variable resistive layer adjacent said exposed surface of said single electrode electroluminescent device;

substantially covering said variable resistive layer with a flexible electrode; and

coupling said current source to said flexible electrode rather than said relief object so that said contacting step contacts said relief object with said flexible electrode so that pressure from ridges and alleys of said relief object generate relatively low and high resistance conductive paths through said variable resistive layer whereby said current from

said current source is provided through said variable resistive layer at different magnitudes correspondence to said ridges and valleys of said relief object and said different currents cause said single electrode electroluminescent device to generate said image of said relief object.

49. A system for generating an image of a relief object comprising:

a single electrode electroluminescent device having a transparent electrode layer and a dielectric layer receiving dispersed light emitting particles and substantially covering said transparent electrode layer; and

an electrical current source, said electrical current source having one lead coupled to said single electrode of said single electrode electroluminescent device and a second lead for coupling to a relief object in proximity to said single electrode electroluminescent device so that current coupled from said current source to said relief object is strongly coupled to said single electrode electroluminescent device by ridges of said relief object and weakly coupled to said electrode electroluminescent device by valleys of said relief object whereby more intense light is generated by areas of said electroluminescent device strongly coupled to said current from said ridges of said relief object and less intense light is generated by areas of said electroluminescent device weakly coupled to said current from valleys of said relief object to form an image of the relief object.

50. The system of Claim 49, wherein said light emitting particles are phosphor particles.

51. The system of Claim 49, wherein said transparent electrode layer is one of indium tin oxide and zinc oxide aluminum.

52. The system of Claim 49, wherein a surface of said single electrode electroluminescent device is concave to facilitate placement of a rounded relief object against said electroluminescent device.

53. The system of Claim 49, further comprising:

a sensor array; and

optical elements interposed between said sensor array and said single electrode electroluminescent device, said optical elements for focusing said generated light on said sensor array.

54. The system of Claim 49, further comprising:

one-to-one sensor array located proximate said single electrode electroluminescent device so that said generated light is sensed by said one-to-one sensor array.

55. The system of Claim 53, wherein said sensor is an integrated circuit.

56. The system of Claim 54, wherein said one-to-one sensor array is amorphous silicon on glass.

57. A system for generating an image of a relief object comprising:

a single electrode organic electroluminescent device having a transparent electrode as an anode, said transparent anode having a thin, sublimed molecular film deposited thereon; and

an electrical current source, said electrical current source having one lead coupled to said transparent anode of said single electrode electroluminescent device and a second lead for coupling to a relief object in proximity to said single electrode electroluminescent device so that current coupled from said current source to said relief object is strongly coupled to said single electrode electroluminescent device by ridges of said relief object and weakly coupled to said electrode electroluminescent device by valleys of said relief object whereby more intense light is generated by areas of said electroluminescent device strongly coupled to said current from said ridges of said relief object and less intense light is generated by areas of said electroluminescent device weakly coupled to said current from valleys of said relief object to form an image of the relief object.

58. The device of Claim 57, said thin, sublimed molecular film being tris(8-quinolinolato) aluminum (III).

59. The device of Claim 57, said organic electroluminescent device further comprising a light-emitting polymer deposited on a transparent anode.

60. The device of Claim 59, said light-emitting polymer being one of the group of poly(p-phenylene vinylene), soluble polythiophene derivatives, or polyanilene.

61. The device of Claim 57, said transparent anode being comprised of a transparent base substrate coated with indium tin oxide.

62. A system for generating an image of a relief object comprising:

a single electrode electroluminescent device;

an electrical current source, said electrical current source having one lead coupled to said single electrode of said single electrode electroluminescent device and a second lead for